



UNITED STATES PATENT AND TRADEMARK OFFICE

ET

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/618,493	07/11/2003	Luz Montesclaros	5063 US	5407

22896 7590 05/31/2006
MILA KASAN, PATENT DEPT.
APPLIED BIOSYSTEMS
850 LINCOLN CENTRE DRIVE
FOSTER CITY, CA 94404

EXAMINER

SCHNIZER, RICHARD A

ART UNIT PAPER NUMBER

1635

DATE MAILED: 05/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/618,493

Applicant(s)

MONTECLAROS ET AL.

Examiner

Richard Schnizer, Ph. D

Art Unit

1635

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 March 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 and 20-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 and 20-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>9/14/05</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

An amendment was received and entered on 3/16/06.

Claim 19 was canceled and new claims 32 and 33 were added.

Claims 1-18 and 20-33 are pending and under consideration in this Office Action.

Request for Interview

At page 19 of the response filed 10/19/05, Applicant set forth a request for an interview in the event that the application was not found to be in condition for allowance. This request was attached to an amendment which must be acted on by the Office in a timely fashion. In the future, Applicant is invited to contact the Examiner directly to arrange any interviews prior to the submission of amendments, so that any remaining issues can be discussed in a timely fashion.

Claim Rejections/Objections Withdrawn

Applicant's amendments were sufficient to overcome the objections to claims 12-14.

Applicants amendments were sufficient to overcome the rejection of claims 4, 16, and 31 under 35 USC 112, second paragraph.

The rejection of claims 1-3, 14, 15, and 17 under 35 U.S.C. 102(b) as being anticipated by Gobbers et al (J. Clin. Microbiol. 39(12): 4339-4343, 2001) is withdrawn in view of Applicant's amendment requiring a zwitterionic detergent.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 14-17 stand rejected under 35 U.S.C. 102(e) as being anticipated by Domanico et al (US Published Application 20040180445).

Domanico taught a method of isolating nucleic acids from bacterial, insect or mammalian cells by treating the cells with a lysis solution comprising guanidine hydrochloride, guanidine thiocyanate, N-decyl-N,N-dimethyl-3-ammonio-1-propanesulfonate, and binding the nucleic acid to a solid matrix. See e.g. abstract, paragraph 30 on page 2, and Table 3 at page 8.

Response to Arguments

Applicant's arguments filed 3/16/06 have been fully considered but they are not persuasive.

Applicant asserts at page 14 of the response that Domanico is directed to methods of purifying low molecular weight DNAs, such as plasmids, and separating them from high molecular weight DNA, RNA, and protein. Applicant argues that Domanico does not teach a method of purifying genomic DNA. This is unpersuasive because Domanico teaches the same method steps as those claimed instantly, so the

Art Unit: 1635

result is considered to be inherent. Because the cells of Domanico must contain genomic DNA, it follows that genomic DNA would be found in the purified product. Applicant has not shown otherwise, and the instant claims recite no step that distinguishes them from the method of Domanico.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-18, and 20-24 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Kuipers et al (Ann. Rheum. Dis. 58: 103-108, 1999) in view of Domanico et al (US Published Application 20040180445).

Kuipers taught a method of isolating Chlamydia genomic DNA by treatment of synovial fluid with proteinase K and either an ionic or a nonionic detergent, addition of the cationic lipid CTAB, addition of a solid support, and elution of the DNA from the support. See abstract; Fig. 1 on page 104, e.g. methods 3b, 3c, 4b, and 4c; see also second and third full paragraphs of column 2 on page 104; and first two full paragraphs on page 105.

Kuipers did not teach a zwitterionic detergent or a chaotrope.

Domanico taught a method of isolating nucleic acids from bacterial, insect or mammalian cells by treating the cells with a lysis solution comprising guanidine

Art Unit: 1635

hydrochloride, guanidine thiocyanate, N-decyl-N,N-dimethyl-3-ammonio-1-

propanesulfonate, and binding the nucleic acid to a solid matrix such as glass beads.

See e.g. abstract, paragraph 30 on page 2, Table 3 at page 8, and e.g. paragraphs 99-109 on page 9. Other zwitterionic detergents taught by Domanico include n-Tetradecyl-N,N-dimethyl-3-ammonio-1-propanesulfonate, n-Octyl-N,N-dimethyl-3-ammonio-1-propanesulfonate, n-Dodecyl-N,N-dimethyl-3-ammonio-1-propanesulfonate, Anzergent 3-14, Analytical Grade; Anzergent 3-8, Analytical Grade; Anzergent 3-10, Analytical Grade; Anzergent 3-12, Analytical Grade, respectively or zwittergent 3-8, zwittergent 3-10, zwittergent 3-12 and zwittergent 3-14, CHAPS, CHAPSO, Apo10 and Apo12. See paragraph 53 on page 5. Other chaotropic agents taught by Domanico include urea and sodium iodide. See paragraph 5.

It would have been obvious to one of ordinary skill in the art at the time of the invention to use a zwitterionic detergent in the method of Kuipers because Domanico taught that non-ionic and zwitterionic detergents could be used as alternatives to lyse cells in DNA isolation procedures. See e.g. paragraph 9 on page 1. In fact, Domanico taught that the choice of detergents was a result-effective variable and explored the use of various different detergents and detergent mixtures, including a mixture of an ionic and a non-ionic detergent (see e.g. paragraphs 99 and 109 on page 9, and Table 5 on page 10. In view of the fact that use of non-ionic, anionic, cationic, and zwitterionic detergents in combination was known in the art at the time of the invention, and the fact that it was recognized that the identity of the detergents used influenced results, it would have been obvious to one of ordinary skill in the art at the time of the invention to

Art Unit: 1635

optimize the detergent content of a nucleic acid isolation mixture in order to maximize nucleic acid yield and purity. Similarly, because it was well known in the art at the time of the invention that chaotropic compounds were useful in the isolation of nucleic acids from cells, e.g. Domanico taught the use of two chaotropes together in a single lysis buffer, it would have been obvious to one of ordinary skill in the art to use the chaotropes of Domanico in the method of Kuipers.

Pertinent to claims 21-24, it would have been obvious to one of ordinary skill in the art at the time of the invention to organize into a kit the elements of the invention of Kuipers as modified by Domanico because one of ordinary skill in the art appreciates that organizing experimental reagents prior to use is standard laboratory practice which reduces the frequency of errors.

Claims 21 and 25-31 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Domanico et al (US Published Application 20040180445).

Domanico taught a method of isolating nucleic acids from bacterial, insect or mammalian cells by treating the cells with a lysis solution comprising guanidine hydrochloride, guanidine thiocyanate, N-decyl-N,N-dimethyl-3-ammonio-1-propanesulfonate, and binding the nucleic acid to a solid matrix such as glass beads. Domanico taught wash solutions comprising Tris buffer salts and alcohols, and alkaline elution buffers. See e.g. abstract; paragraph 30 on page 2; Table 3 at page 8; paragraphs 99-109 on page 9; and paragraphs 72 and 73 on pages 6 and 7. Other zwitterionic detergents taught by Domanico include n-Tetradecyl-N,N-dimethyl-3-

Art Unit: 1635

ammonio-1-propanesulfonate, n-Octyl-N,N-dimethyl-3-ammonio-1-propanesulfonate, n-Dodecyl-N,N-dimethyl-3-ammonio-1-propanesulfonate, Anzergent 3-14, Analytical Grade; Anzergent 3-8, Analytical Grade; Anzergent 3-10, Analytical Grade; Anzergent 3-12, Analytical Grade, respectively or zwittergent 3-8, zwittergent 3-10, zwittergent 3-12 and zwittergent 3-14, CHAPS, CHAPSO, Apo10 and Apo12. See paragraph 53 on page 5. Other chaotropic agents taught by Domanico include urea and sodium iodide. See paragraph 5.

Domanico did not teach a kit comprising the various components of the method.

It would have been obvious to one of ordinary skill in the art at the time of the invention to organize the elements of the invention of Domanico into a kit because one of ordinary skill in the art appreciates that organizing experimental reagents prior to use is standard laboratory practice which reduces the frequency of errors.

Claims 32 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuipers et al (Ann. Rheum. Dis. 58: 103-108, 1999) and Domanico et al (US Published Application 20040180445) as applied to claims 1-18 and 20-24 above, and further in view of Kuipers et al (Arthritis and Rheumatism, (1998 Oct) Vol. 41, No. 10, pp. 1894-5).

The teachings of Kuipers (1999) and Domanico are discussed above and can be combined to render obvious a method of isolating Chlamydia genomic DNA from synovial fluid using a protease, a zwitterionic detergent, a chaotropic agent, and a solid support.

These references did not teach isolation of nucleic acids from blood.

Kuipers (1998) taught a method of detecting Chlamydia genomic DNA from peripheral blood leukocytes.

It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the DNA isolation procedure of Kuipers as modified by Domanico to blood or to any other tissue with a reasonable expectation of success Domanico taught that the combination of a zwitterionic detergent and chaotropic agent could be used to lyse a wide variety of cells including mammalian cells, insect cells, and bacterial cells. There is no reason to doubt that the method could be used to isolate DNA from blood cells.

Response to Arguments

Applicant's arguments filed 3/16/06 have been fully considered but they are not persuasive.

Applicant addresses the rejection over Kuipers in view of Domanico at pages 14-16 of the response. Applicant argues that there is no motivation to use the teachings of Domanico in any method for obtaining nucleic acids that include high molecular weight genomic DNA because Domanico teaches the purification of low molecular weight nucleic acids and their separation from high molecular weight DNAs. This is unpersuasive because Domanico was not relied upon in the rejection to teach isolation of high molecular weight DNA. Kuipers taught the isolation of high molecular weight genomic DNA. Domanico was relied upon to teach that a variety of zwitterionic

Art Unit: 1635

detergents can be used to lyse cells, and that these detergents were equivalent to the detergents used by Kuipers. In the absence of unexpected results, it would have been obvious to use the zwitterionic detergents of Domanico in the method of Kuipers because these detergents function similarly to those used by Kuipers, i.e. they are useful for lysing cells and allow nucleic acid purification.

Applicant addresses the rejection of claims 21 and 25-31 at page 16 of the rejection, arguing that Domanico does not render obvious kits for isolating nucleic acids that comprise genomic DNA. This is unpersuasive for the reasons set forth above under the 102 rejection. Domanico teaches the same claim elements as in the instant claims. Applicant has not shown that the solid support of Domanico would not bind gDNA, and has not limited the claim to, or provided any example of, a support that binds genomic DNA but not plasmid DNA. As a result the kits of Domanico would render obvious the instant kits.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-3, 5-12, 14, 15, 17, 18, and 21-30 stand rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-64 of U.S. Patent No. 6,762,027. Although the conflicting claims are not identical, they are not patentably distinct from each other for the following reasons.

The claims of '027 are drawn to methods and kits for methods and kits for contacting whole tissue with a disrupting buffer comprising a protease and a cationic surfactant, substantially neutralizing the surfactant, and binding the nucleic acid to a solid phase. The specification teaches at column 10, lines 8-18 that "substantially neutralizing" embraces addition of one or more of chaotropes, nonionic surfactants, anionic surfactants, and zwitterionic surfactants. So, it would have been obvious through routine optimization to assess the activity of various combinations of chaotropes, nonionic surfactants, anionic surfactants, and zwitterionic surfactants, such as those required in instant claims 5-7, 11, 12, and 15. Claim 5 of '027 requires the use of the cationic surfactants of instant claims 10, 12, and 13. Claim 7 of '027 requires the use of a chaotrope selected from the group: NaBr, NaI, NaSCN, LiCl, LiBr, LiI, GuHCl, and GuSCN. Claim 25 of '027 requires isolating the bound nucleic acid, i.e. eluting it from the solid support. It is clear from the specification as a whole the claimed methods result in isolating genomic DNAs, see e.g. the brief descriptions of Figs. 13-30, at columns 3 and 4. Claim 15 of '027 requires the use of proteinases selected from proteinase K, proteinase, R, proteinase T, subtilisin DY, an alkaline serine protease

Art Unit: 1635

from *Streptomyces griseus*, an alkaline serine protease from *Bacillus licheniformis*, dispase, subtilisin Calsberg, subtilopeptidase A, and thermolysin.

'027 does not teach a kit with wash or elution solutions, however, claims 25-40 require elution of the nucleic acid from the solid support. The portion of the specification supporting these claims teaches that solid supports comprising DNA were washed in 90% ethanol and DNA was eluted in an alkaline solution buffered with Tris HCl and with a second solution of NaOH. See column 36, lines 31-41. It would have been obvious to one of ordinary skill in the art at the time of the invention to add the wash and elution solutions to the kits of the '027 patent simply because these solutions allow isolation of nucleic acids purified by the methods claimed in the '027 patent.

Claims 4, 13, 16, 20, and 31 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-64 of U.S. Patent No. 6,762,027 as applied to claims 1-3, 5-12, 14, 15, 17-19, and 21-30 above, and further in view of Domanico et al (US Published Application 20040180445). Although the conflicting claims are not identical, they are not patentably distinct from each other for the following reasons.

The teachings of the '027 patent are discussed above. Although '027 teaches zwitterionic surfactants, it does not exemplify any.

Domanico taught a method of isolating nucleic acids from bacterial, insect or mammalian cells by treating the cells with a lysis solution comprising guanidine hydrochloride, guanidine thiocyanate, and the zwitterionic detergent N-decyl-N,N-

Art Unit: 1635

dimethyl-3-ammonio-1-propanesulfonate, and binding the nucleic acid to a solid matrix such as glass beads. See e.g. abstract, paragraph 30 on page 2, Table 3 at page 8, and e.g. paragraphs 99-109 on page 9. Other zwitterionic detergents taught by Domanico include n-Tetradecyl-N,N-dimethyl-3-ammonio-1-propanesulfonate, n-Octyl-N,N-dimethyl-3-ammonio-1-propanesulfonate, n-Dodecyl-N,N-dimethyl-3-ammonio-1-propanesulfonate, Anzergent 3-14, Analytical Grade; Anzergent 3-8, Analytical Grade; Anzergent 3-10, Analytical Grade; Anzergent 3-12, Analytical Grade, respectively or zwittergent 3-8, zwittergent 3-10, zwittergent 3-12 and zwittergent 3-14, CHAPS, CHAPSO, Apo10 and Apo12. See paragraph 53 on page 5.

It would have been obvious to one of ordinary skill in the art at the time of the invention to use the zwitterionic detergents of Domanico in the methods and kits of '027 because the claims of '027 require substantial neutralization of a cationic surfactant, and the specification of '027 teaches at column 10, lines 8-18 that "substantially neutralizing" embraces addition of one or more of chaotropes, nonionic surfactants, anionic surfactants, and zwitterionic surfactants. The zwitterionic surfactants of Domanico are used in a similar method, so it would have been clear to one of ordinary skill in the art at the time of the invention to use them in the methods and kits of the '027 patent. Regarding the tissue sources of instant claim 20, the "tissue" of the '027 claims includes biopsy materials and aspirates; in vitro cultured cells, including primary and secondary cells, transformed cell lines, and tissue and cellular explants; lymph; and body fluids such as urine, sputum, semen, secretions, eye washes and aspirates, lung washes and aspirates.

Response to Arguments

Applicant's arguments filed 3/16/06 have been fully considered but they are not persuasive.

Applicant addresses the double patenting rejections at pages 17-19 of the response. Applicant notes that the rejection explicitly addresses claims 5-7, 11, 12, and 15, but does not explicitly address claims 1-3, 9, 10, 14, 17, 18, and 21-30. To clarify, claim 5 depends from and further limits claims 1-3, so if claim 5 is obvious, then so are claims 1-3. Instant claims 9 and 10 require a cationic detergent (such as CTAB, and a chaotrope, respectively. Every one of the '027 claims requires a cationic surfactant. The specification teaches that the cationic surfactant may be CTAB, among others. See column 8, lines 22-51 for a list of 20 or 30 cationic surfactants. As stated in the rejection, the claims of '027 are drawn to methods and kits for methods and kits for contacting whole tissue with a disrupting buffer comprising a substantially neutralizing the surfactant. The specification teaches at column 10, lines 8-18 that "substantially neutralizing" embraces addition of one or more of chaotropes, nonionic surfactants, anionic surfactants, and zwitterionic surfactants. Hence instant claims 10, 14, and 18 are obvious. Further, claim 15 was specifically addressed, and since it depends from and further limits claim 14, then claim 14 must be obvious. Claim 17 requires that the chaotrope of claim 15 must be one of several chaotropes that are disclosed in claim 7 of '027, as stated in the rejection. Instant claims 21-30 are directed to kits comprising components recited in claims already held to be obvious, or listed in the rejection.

Applicant points out that the claims of '027 are limited to tissues that are not blood. The Examiner points out that no claims requiring blood have been rejected. Applicant is arguing a limitation that is not in the rejected claims.

Applicant argues that the independent kit claims of '027 contain a cationic surfactant while independent kit claim 21 of the instant application does not include one. This is unpersuasive. First, the instant kit claims do not exclude a cationic surfactant, and second instant claim 24, which depends from instant claim 21, requires a cationic detergent. One of ordinary skill in the art appreciates that detergents are surfactants, see e.g. the '027 patent at the paragraph bridging columns 7 and 8.

Applicant argues in the paragraph bridging pages 18 and 19 that the basis has not been addressed for rejecting the instant kit claims reciting wash and elution solutions. This is unpersuasive. '027 claims 25-40 require elution of the nucleic acid from the solid support. The portion of the specification supporting these claims teaches that solid supports comprising DNA were washed in 90% ethanol and DNA was eluted in an alkaline solution buffered with Tris HCl and with a second solution of NaOH. See column 36. lines 31-41. Wash and elution solutions are therefore obvious, and their inclusion in a kit is obvious simply because these solutions allow isolation of nucleic acids purified by the methods claimed in the '027 patent.

Applicant addresses claims 4, 13, 16, 20, and 31 at page 19 of the response. Applicant again argues that the claims of '027 exclude blood whereas the instant claims are drawn to blood. This is unpersuasive because none of the rejected claims exclude blood.

For these reasons the rejections are maintained.

Conclusion

No claim is allowed.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner(s) should be directed to Richard Schnizer, whose telephone number is 571-272-0762. The examiner can normally be reached Monday through Friday between the hours of 6:00 AM and 3:30 PM. The examiner is off on alternate Fridays, but is sometimes in the office anyway.

Art Unit: 1635

If attempts to reach the examiner by telephone are unsuccessful, the Examiner's supervisor, Peter Paras, can be reached at (571) 272-4517. The official central fax number is 571-273-8300. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to (571) 272-0547.

Patent applicants with problems or questions regarding electronic images that can be viewed in the Patent Application Information Retrieval system (PAIR) can now contact the USPTO's Patent Electronic Business Center (Patent EBC) for assistance. Representatives are available to answer your questions daily from 6 am to midnight (EST). The toll free number is (866) 217-9197. When calling please have your application serial or patent number, the type of document you are having an image problem with, the number of pages and the specific nature of the problem. The Patent Electronic Business Center will notify applicants of the resolution of the problem within 5-7 business days. Applicants can also check PAIR to confirm that the problem has been corrected. The USPTO's Patent Electronic Business Center is a complete service center supporting all patent business on the Internet. The USPTO's PAIR system provides Internet-based access to patent application status and history information. It also enables applicants to view the scanned images of their own application file folder(s) as well as general patent information available to the public.

For all other customer support, please call the USPTO Call Center (UCC) at 800-786-9199.

A handwritten signature in black ink, appearing to read 'R. Schnizer', with a long horizontal flourish extending to the right.

Richard Schnizer, Ph.D.
Primary Examiner
Art Unit 1635